



Germany

Country dashboard

Agents, robots, and us

How AI reshapes work and skills in Europe

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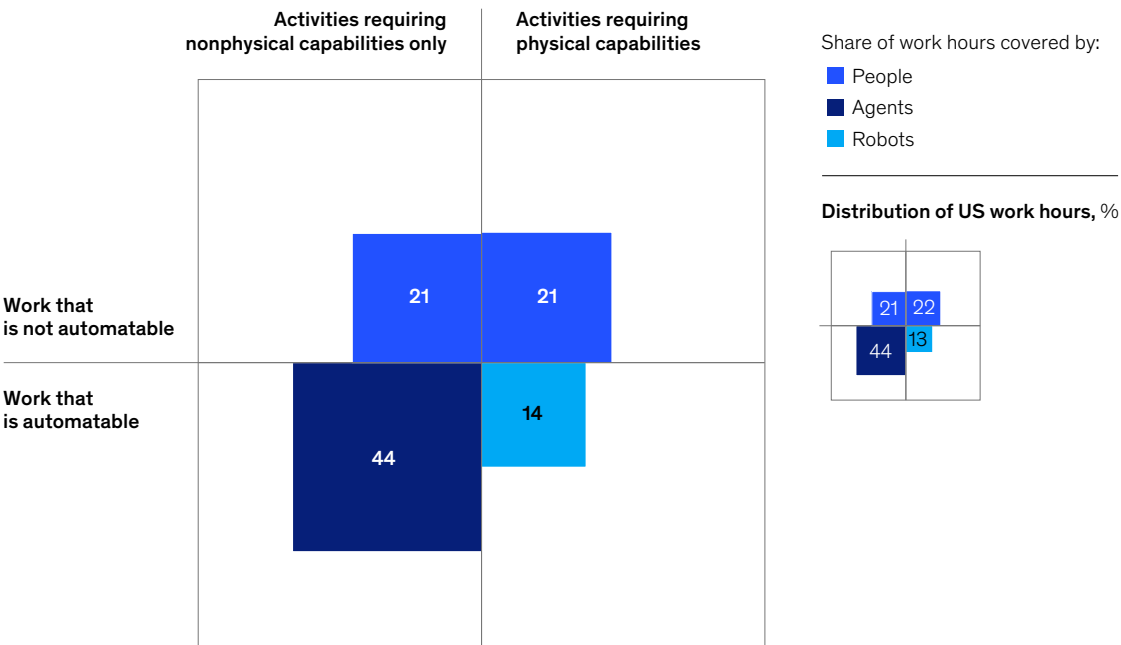


At a glance

- **Work in Europe will increasingly involve collaboration among people, agents, and robots.** Across ten countries, 58 percent of current work hours could theoretically be automated using existing technologies—a share similar to that in the United States, though shaped by Europe's distinct mix of industries. This reflects technical feasibility, not a forecast of actual adoption or job losses.
- **In Europe, automation could unlock up to \$1.9 trillion in economic value by 2030, but how much is realized will hinge on the pace of adoption.** In a gradual scenario, significantly less value would be captured. Factors such as costs, regulation, and organizational readiness will shape adoption.
- **Most human skills will endure, even as they are applied differently.** Three-quarters of the skills sought by European employers today, including problem-solving, writing, and research, are used in both automatable and non-automatable work. This overlap means they are more likely to be applied in collaboration with AI than replaced by it, at least in the near term.
- **Demand for AI-related skills is rising in Europe's workforce, but unevenly across countries.** Demand for AI fluency has increased fivefold since 2023 and now appears in job postings across occupations representing 5 percent of employment.
- **Leadership choices will shape how AI adoption unfolds across Europe.** Capturing the opportunity will require redesigning workflows, investing in skills, and supporting workers as they adapt to working alongside agents and robots.

People, agents, and robots could all play significant roles in the workforce of the future.

Distribution of work hours in Europe, by technical automation potential,¹ 2024, %



Note: Includes only Czech Republic, Denmark, France, Germany, Italy, Netherlands, Poland, Spain, Sweden, and United Kingdom.
¹Automation potential is based on current capabilities of technology to perform human work. Automation potential shown is the late scenario of expert estimates. The early scenario of global technical automation potential ranges from 60% to 70% of current work hours.
 Source: National statistical offices; O*NET; McKinsey Global Institute analysis

Artificial intelligence and automation are reshaping how work is done across advanced economies. In Europe, the stakes are particularly high. The region faces a shrinking and aging workforce, persistent labor shortages, and slower productivity growth than peers such as the United States.¹ Sustaining competitiveness and living standards will depend on the effective integration of people and technology.

Extending recent McKinsey Global Institute (MGI) research on the United States, *Agents, robots, and us: Skill partnerships in the age of AI*, this report turns the focus to Europe, examining how AI could reshape the skills that underpin work and, in turn, productivity and growth. We cover ten economies that together account for more than three-quarters of the region's labor force and GDP.²

Across these economies, some 58 percent of current work hours could theoretically be automated using existing technologies—AI-enabled agents for cognitive tasks, and robots for physical work.³ This reflects what is technologically feasible today, not what is likely to be adopted in practice, and it does not imply widespread job loss. Rather, it signals a fundamental shift in how work is performed. As tasks within jobs become automated, roles will evolve and new activities will emerge, leading to profound changes in how workers across Europe apply their skills.

¹ "A new future of work: The race to deploy AI and raise skills in Europe and beyond," McKinsey Global Institute, May 21, 2024; and "Time to place our bets: Europe's AI opportunity," McKinsey Global Institute, October 1, 2024.

² Based on World Bank data for 2024. Europe includes the 27 EU member states plus Albania, Iceland, Montenegro, North Macedonia, Norway, Serbia, Switzerland, United Kingdom.

³ Our analysis focuses exclusively on paid productive hours in the workforce, encompassing full-time and part-time work across industries, occupations, and skill levels. We assess only the share of time awake that is spent on work-related activities. Our analysis excludes time spent on unpaid tasks and leisure, but agents and robots could be used in related activities to support productivity and personal well-being.

Germany

At 59 percent, Germany's technical automation potential is roughly in line with the European average, with manufacturing accounting for about a quarter of the estimated \$486 billion that could be unlocked through automation by 2030. Demand for AI-related skills is rising quickly: Since 2023, employer demand for AI fluency has increased sixfold—greater than the regional average—while demand for technical AI skills has grown more moderately.

59%

Share of current work hours technically automatable with existing technology

\$486 billion

Estimated economic value from automation adoption by 2030, midpoint scenario

86%

Share of human skills that will endure for people amid automation

6.1×

People in jobs requiring AI fluency in 2025 vs 2023

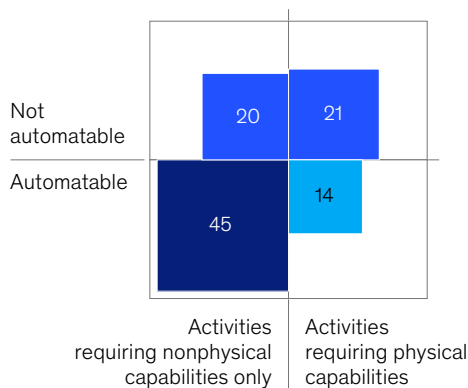
Automation could change how work gets done in Germany.

Distribution of work hours, 2024

Share of work that could be done by:

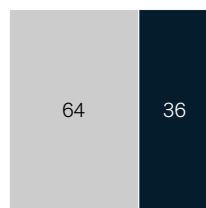
● People ● Agents ● Robots

Hours by technical automation potential,¹ %



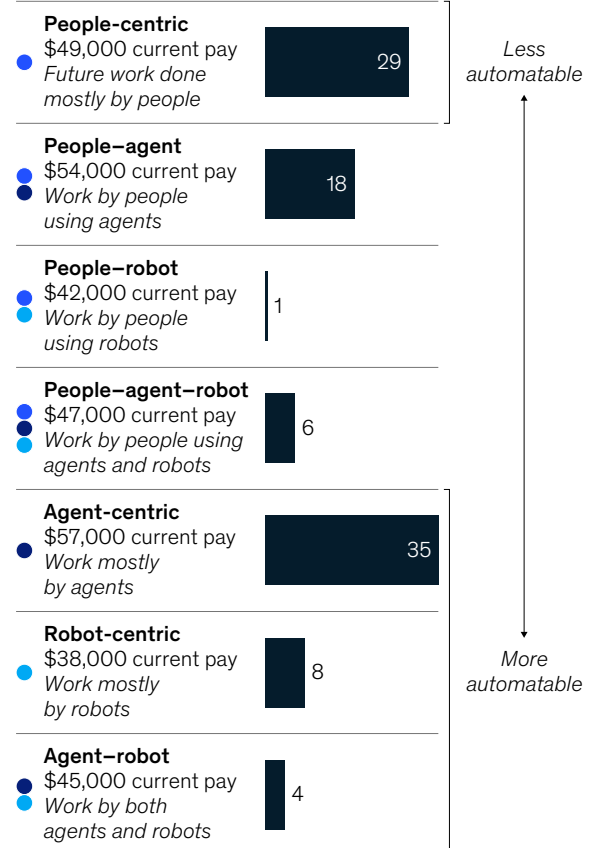
Hours by capabilities required, %

■ Nonphysical
■ Physical



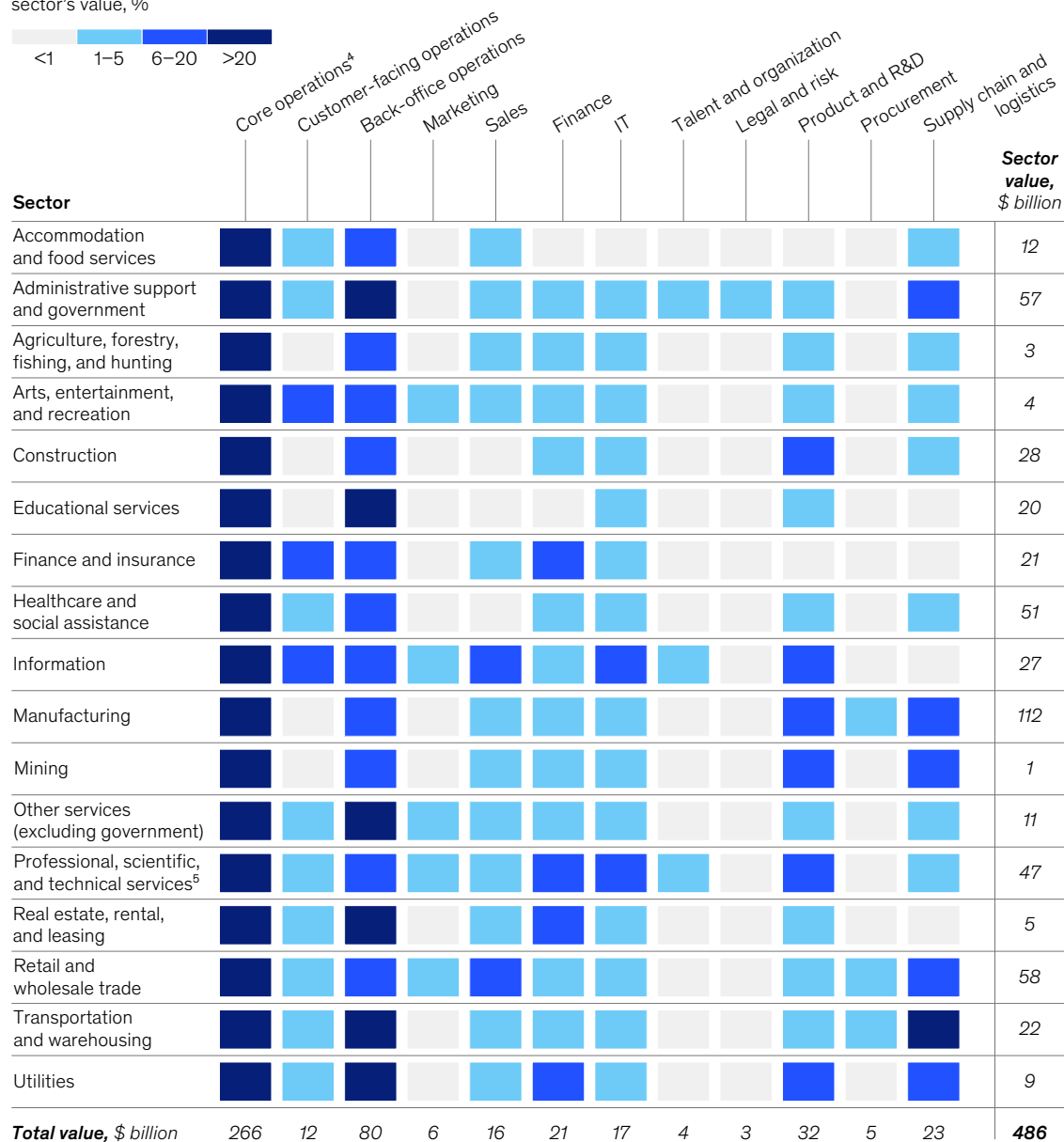
34% of workforce in more physical roles²

Distribution of workforce across occupation archetypes, 2024, %



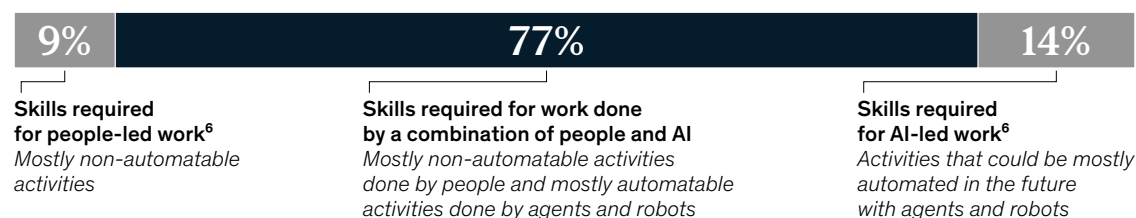
Economic value of sectors and domains, 2030 midpoint scenario of automation adoption³

Domain's share of each sector's value, %



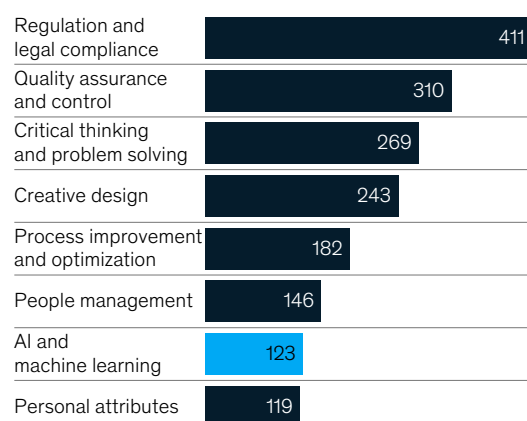
AI will reshape skills in Germany's workforce.

Distribution of ~3,900 skills by technical automation potential, 2024



Change in occupations with postings mentioning each skill subcategory, 2023–25⁷

Greatest increases

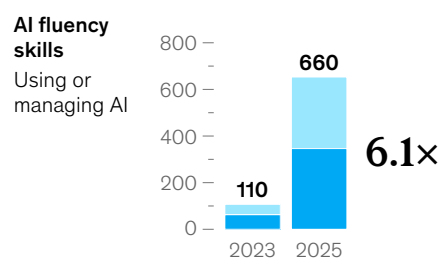


Greatest decreases



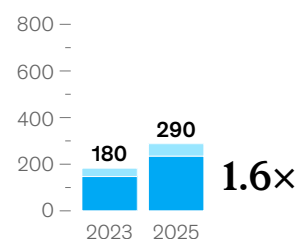
Employees in occupations with AI-related skills in at least 5% of postings, thousand

Occupation type: ■ STEM⁸ ■ Non-STEM

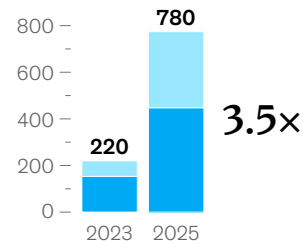


Technical AI skills

Developing or governing AI



Any AI-related skills⁹



Employees in occupations with AI-related skills in at least 5% of postings¹⁰

Occupation type: ■ STEM ■ Non-STEM

Occupation group	Total FTE workers, million	Workers whose jobs require AI skills	
		Share, %	Count
Computer and mathematical	1.3	29	370,000
Sales and related	3.2	3	86,000
Business and financial operations	1.3	6	79,000
Management	1.5	5	77,000
Architecture and engineering	1.6	4	68,000
Educational instruction and libraries	1.1	6	62,000
Life, physical, and social sciences	0.5	3	12,000
Arts, design, entertainment, sports, and media	0.5	3	12,000
Transportation and material moving	3.6	<1	8,700
Office and administrative support	7.5	<1	1,800
Legal	0.1	1	620
Farming, fishing, and forestry	0.05	1	470
Protective services	0.3	<1	40
Healthcare practitioners and technical occupations	2.9	<1	30
8 other groups	9.6	—	0

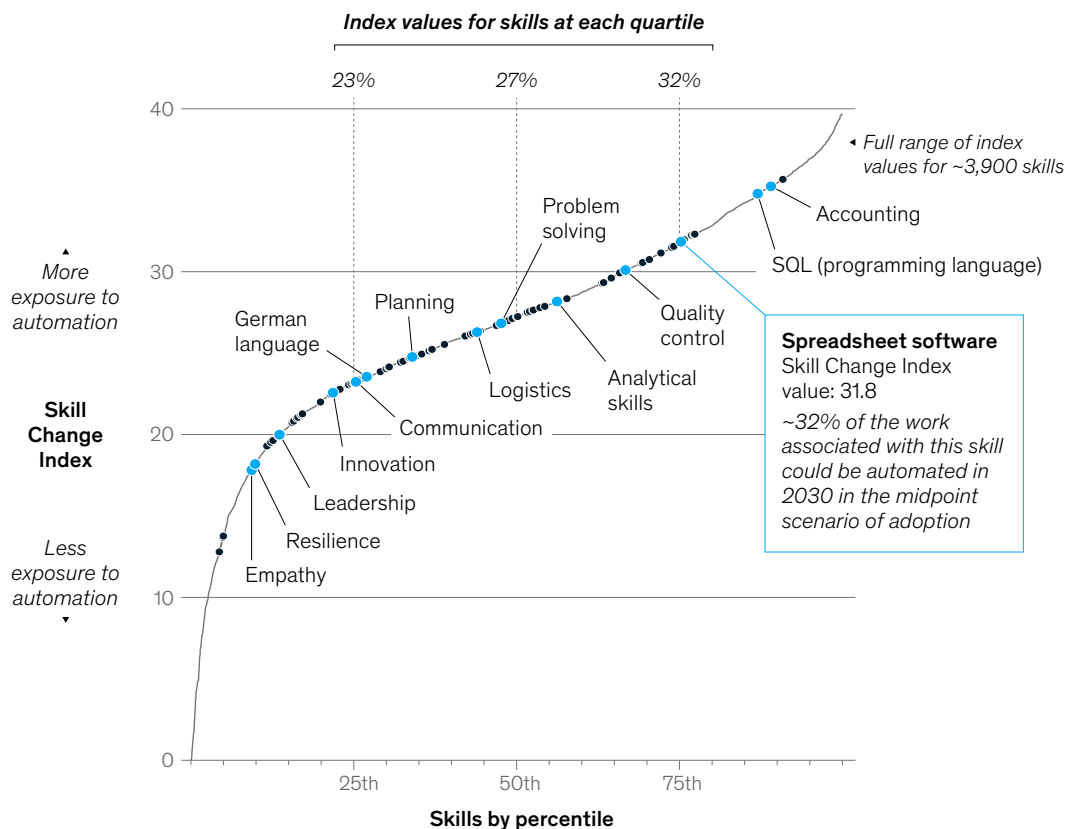
~80%
of demand
for AI skills
from 4
groups

~20%
of demand
for AI skills
from 10
groups

8 groups
with no AI
skills demand

Skill Change Index,¹¹ % (0–100 scale)

● Circles = index values of top skills



Note: Values are in nominal US dollars. Figures may not sum to 100% due to rounding. Exhibits analyzing AI-related skills demand include only occupations with 30 or more job postings in Q4 2025. ¹Automation potential reflects technological capabilities to perform work. Estimates shown represent the late scenario of expert assessments. In an early scenario, global technical automation potential ranges from 60% to 70% of current work hours. ²Defined as occupations in which at least 40% of work hours require physical capabilities. ³Estimated by multiplying occupation-level automation adoption in the 2030 midpoint scenario by full-time equivalents and 2024 wages. ⁴Includes customer-facing domains directly involved in delivering products or services. Excludes support domains, except where these constitute core operations within a given sector, for example, finance professionals in the finance and insurance industry. ⁵Includes management of companies and enterprises. ⁶“People-led” and “AI-led” skills are defined as those used in more than 80% of time spent on associated work activities. ⁷At least 1 skill in the subcategory appears in ≥5% of job postings for a given occupation. ⁸STEM roles include computer and mathematical; architecture and engineering; life, physical, and social sciences; and healthcare occupations. ⁹Employees in jobs requiring AI-related skills may need AI fluency, technical AI skills, or both; totals may not sum. ¹⁰Includes only skills Lightcast categorizes as “artificial intelligence and machine learning” or “natural language processing.” ¹¹Based on the projected 2030 midpoint scenario of automation adoption, aggregated across occupations using employment-based weighting. We exclude skills that could not be linked to work activities within occupations.

Source: Eurostat; Germany’s Federal Statistical Office; Lightcast; O*NET; McKinsey Global Institute analysis

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